AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Withdrawn) A method of measuring transverse sensitivity of a sensor for detecting acceleration comprising:

applying vibration acceleration to at least one sensor which is fixed, via a jig, on a uniaxial vibration generator for generating translational motion, and which detects acceleration with said vibration generator; and

calculating transverse sensitivity, one of elements of a sensitivity matrix of said sensor, from an output value of said sensor obtained by the application of the vibration acceleration, and from a measurement value of input acceleration to said sensor obtained by measuring the input acceleration with a measuring instrument independent of said sensor during the application,

wherein the application is carried out in a state in which a coordinate axis of a coordinate system of a space defining the input acceleration to said sensor is aligned with a direction of the vibration by adjusting said jig.

2. (Withdrawn) A method of measuring transverse sensitivity of a sensor for detecting acceleration comprising:

applying vibration acceleration to a sensor which is fixed, via a jig, on a uniaxial vibration generator for generating translational motion, and which detects at least one of translational acceleration, rotational angular velocity and rotational angular acceleration with said vibration generator; and

calculating transverse sensitivity, one of elements of a sensitivity matrix of said sensor, from an output value of said sensor obtained by the application of the vibration acceleration, and from a measurement value of input acceleration to said sensor obtained by measuring with a measuring instrument independent of said sensor during the application;

wherein the application is carried out in a state in which a coordinate axis of a three-axis Cartesian coordinate system of a space defining the input acceleration to said sensor is aligned with a direction of the vibration by adjusting said jig.

3. (Withdrawn) A sensor for detecting acceleration having a casing comprising planes perpendicular to at least two coordinate axes of a coordinate system of a space defining input acceleration to said sensor.

4. (Withdrawn) The method of measuring transverse sensitivity of a sensor as claimed in claim 1, wherein said sensor is the sensor as defined in claim 3, and said measuring instrument comprises a laser interferometer for carrying out laser irradiation of the planes of said sensor.

5. (Withdrawn) The method of measuring transverse sensitivity of a sensor as claimed in claim 2, wherein said sensor is the sensor as defined in claim 3, and said measuring instrument comprises a laser interferometer for carrying out laser irradiation of the planes of said sensor.

6. (Original) A method of measuring transverse sensitivity of a sensor for detecting acceleration comprising:

applying vibration acceleration to at least one sensor which is fixed, via a jig, on a uniaxial vibration generator for generating rotational vibration motion, and which detects acceleration with said vibration generator; and

calculating transverse sensitivity, one of elements of a sensitivity matrix of said sensor, from an output value of said sensor obtained by the application of the vibration acceleration, and from a measurement value of input acceleration to said sensor obtained by measuring the input acceleration with a measuring instrument independent of said sensor during the application,

wherein the application is carried out in a state in which a coordinate axis of a coordinate system of a space defining the input acceleration to said sensor is aligned with a direction of a rotational axis of the vibration by adjusting said jig.

7. (Original) A method of measuring transverse sensitivity of a sensor for detecting acceleration comprising:

applying vibration acceleration to a sensor which is fixed, via a jig, on a uniaxial vibration generator for generating rotational vibration motion, and which detects at least one of translational acceleration, rotational angular velocity and rotational angular acceleration with said vibration generator; and

calculating transverse sensitivity, one of elements of a sensitivity matrix of said sensor, from an output value of said sensor obtained by the application of the vibration acceleration, and from a measurement value of input acceleration to said sensor

obtained by measuring with a measuring instrument independent of said sensor during the application;

wherein the application is carried out in a state in which coordinate axis of a three-axis Cartesian coordinate system of a space defining the input acceleration to said sensor is aligned with a direction of a rotational axis of the vibration by adjusting said jig.

8. (Currently Amended) An acceleration measuring method comprising:

when obtaining N components of acceleration by combining N sensors for detecting acceleration (N is an integer equal to or greater than two), improving detection accuracy of the acceleration by multiplying an output of each sensor by an inverse matrix of a sensitivity matrix composed of main axis sensitivity and transverse sensitivity of the sensor, which are obtained by applying the method as defined in any one of claims ~~1, 2, 4, 5,~~ 6 and 7 to the sensor.

9. (Currently Amended) An acceleration measuring method comprising:

when obtaining acceleration with a sensor for detecting at least biaxial acceleration, improving detection accuracy of the acceleration by multiplying an output of the sensor by an inverse matrix of a sensitivity matrix composed of main axis sensitivity and transverse sensitivity of the sensor, which are obtained by applying the method as defined in any one of claims ~~1, 2, 4, 5,~~ 6 and 7 to the sensor.

10. (Withdrawn) The method of measuring transverse sensitivity of a sensor for detecting acceleration comprising: calculating the transverse sensitivity, one of elements of a sensitivity matrix of the sensor for detecting acceleration, from the transverse sensitivity measured by the method as defined in claim 1 and from the transverse sensitivity measured by the method as defined in claim 6.

11. (Withdrawn) The method of measuring transverse sensitivity of a sensor for detecting acceleration comprising: calculating the transverse sensitivity, one of elements of a sensitivity matrix of the sensor for detecting acceleration, from the transverse sensitivity measured by the method as defined in claim 2 and from the transverse sensitivity measured by the method as defined in claim 7.

12. (Withdrawn) A sensor for detecting acceleration having a casing comprising: an irradiation surface formed on a plane including a rotational axis of said sensor or on a plane parallel to the rotational axis.

13. (Withdrawn) A sensor for detecting acceleration having a casing comprising a diffraction grating around a rotational axis of said sensor.

14. (Withdrawn) The method of measuring transverse sensitivity of a sensor as claimed in any one of claims **6**, **7** and **10**, wherein said sensor is the sensor as defined in claim 12, and said measuring instrument comprises a laser interferometer for carrying out laser irradiation of two locations on said irradiation surface of said sensor.

15. (Withdrawn) The method of measuring transverse sensitivity of a sensor as claimed in any one of claims **6**, **7** and **10**, wherein said sensor is the sensor as defined in claim 13, and said measuring instrument comprises a laser interferometer for carrying out laser irradiation of said diffraction grating of said sensor.